

CLAIMS

1. Process for regenerating a spent hydrogenation catalyst comprising at least one catalytic metal selected from the group consisting of Ru, Rh, Pd, Os, Ir and Pt on an inert support, characterized in that the spent catalyst has been used
5 in a reaction of hydrogenation of traces of acetylene which are present in a gas mixture consisting essentially of HCl and obtained from the pyrolysis of 1,2-dichloroethane (DCEa) and in that the said process consists essentially of a thermal treatment in the presence of oxygen at a temperature of between 300 and 700°C.
- 10 2. Process according to the preceding claim, characterized in that the catalytic metal is Pd.
3. Process according to either of the preceding claims, characterized in that the inert support is based primarily on silica.
4. Process according to any one of the preceding claims, characterized in
15 that the inert support has a BET surface area of less than 5 m²/g.
5. Process according to any one of the preceding claims, characterized in that the temperature during the thermal treatment is between 400 and 600°C.
6. Process according to any one of the preceding claims, characterized in that the thermal treatment takes place in the presence of air.
- 20 7. Process according to the preceding claim, characterized in that the thermal treatment consists in a residence in a stove or a ventilated electric oven.
8. Process according to any one of the preceding claims, characterized in that the catalyst is contaminated with traces of heavy metals.
9. Process for synthesizing vinyl chloride monomer (VCM) by coupling a
25 direct chlorination and an oxychlorination of ethylene to form DCEa, which is converted primarily into VCM and into HCl by pyrolysis, the said HCl containing traces of acetylene and being recycled to the oxychlorination following hydrogenation of these traces of acetylene in the presence of a catalyst regenerated by a process according to any one of the preceding claims.